

**NON-RADIATIVE SHOCKS IN THE CYGNUS LOOP:  
H<sub>2</sub> IN HH<sub>2</sub> FLOURESCENCE OR COLLISIONS?**

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"Non-Radiative Shocks in the Cygnus Loop: H<sub>2</sub> in HH2: Fluorescence or Collisions?"

FUSE observations at 4 positions across a faint H alpha filament in the northern Cygnus Loop were carried out successfully. The O VI profiles were measured in the 4 spectra, and we are in the process of fitting them. We have constructed models for a rippled sheet of emission seen almost edge-on based on non-radiative shock wave models for the time-dependent ionization state of the gas behind the shock. The function that describes the rippled sheet geometry predicts the line-of sight velocity component, and we add thermal broadening for various assumed values of ion-ion and ion-electron equilibration. We then compute the radiative transfer in each of the O VI lines along the line of sight. Finally, we multiply by the transmission of the ISM using average O VI column densities. So far, it appears that partial thermal equilibration is required. Neither full equilibration nor total lack of equilibration seems to provide a workable model.

The HH2 observations have not yet been obtained. FUSE has many targets in this region of the sky. We are hoping to get the observations in the spring if FUSE pointing stability allows.